2896

A GEOPHYSICAL AND GEOCHEMICAL REPORT

ON THE

SPARK AND JOY CLAIMS

OMINECA MINING DIVISION

55° 126° SE

45 MILES NORTHEAST OF SMITHERS, B. C.

FOR

PALISADE EXPLORATION CORPORATION LTD.

BY

R. W. WOOLVERTON, P. ENG.

BETWEEN

AUGUST 7 AND NOVEMBER 10, 1970

FEBRUARY 26, 1971

VANCOUVER, B. C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2896 MAP .....

APPENDICES

I GEOCHEMICAL ANALYTICAL PROCEDURE

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III "SABRE" I.P. SPECIFICATIONS

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INTRODUCTION

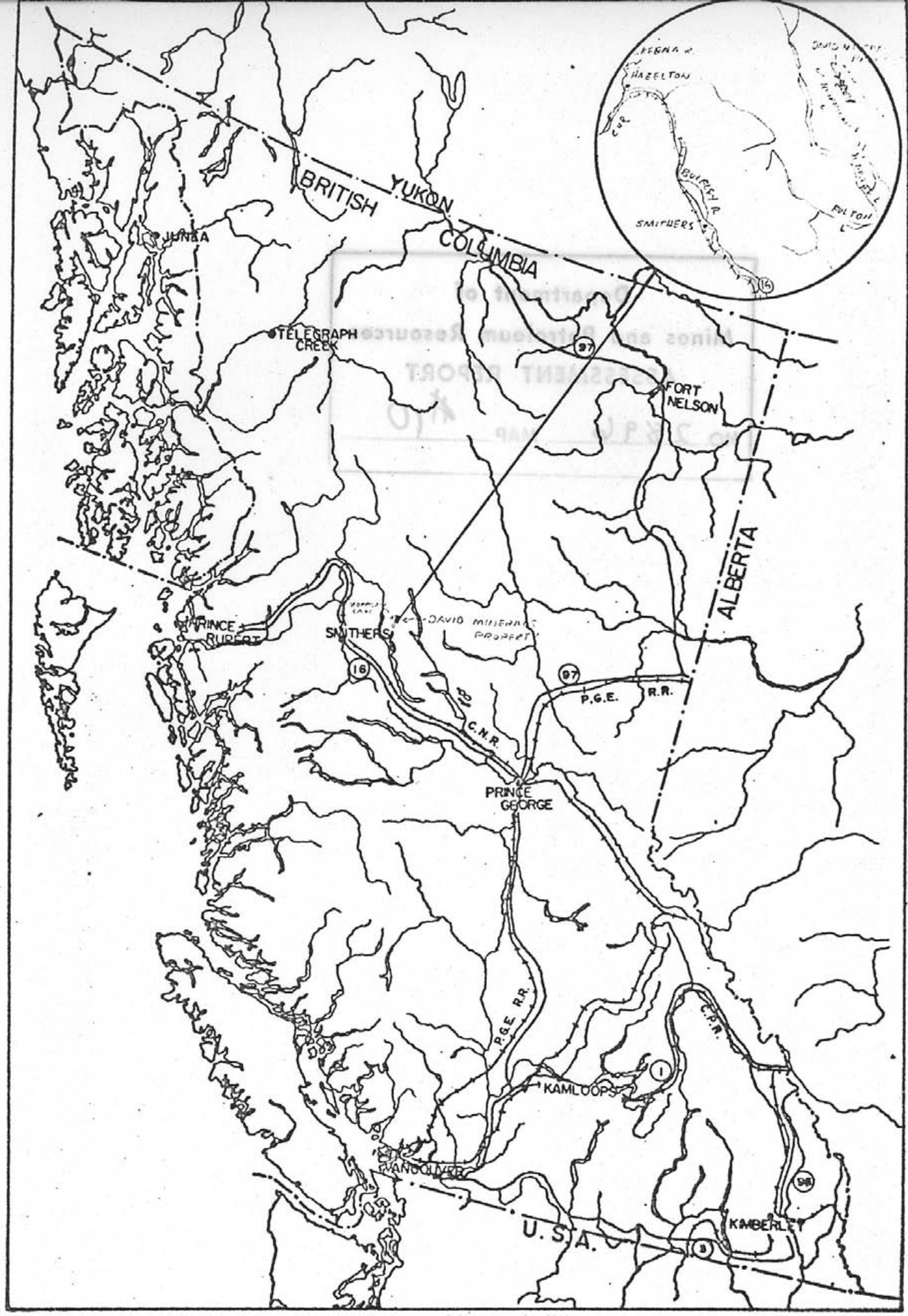
LOCATION

The Spark and Joy claims are at the northeast corner of Morrison Lake about 45 air miles northeast of Smithers, B. C. at Latitude 55° 16' North and Longitude 126° 23' West. The area is most conveniently reached by float plane from McLure Lake, near Telkwa, or by helicopter from Smithers (Okanagan) or Houston (Alpine Helicopters). The more tedious route to the claims is by road to Smithers Landing on Babine Lake, by boat from there to the head of Hatchery Arm, by cat road from the Arm to the south end of Morrison Lake, and by boat to the north end of the lake.

Elevations on the claim group range from about 2,400 ft. at lake level to a maximum of 3,000 ft. Exposure is good on about a third of the property, but the remainder is drift covered. Scrub balsam and hemlock are widespread with birch and poplar on the drier hillsides. Several beaver-dammed swamps make travel locally difficult, although the going is about average for the Babine area.

GEOLOGICAL SETTING

The area is underlain (Carter and Kirkham, Map 69-1, B. C. Department of Mines) by two sedimentary-volcanic groups. The older assemblage contains mudstone, greywacke, conglomerate, limestone, tuff and vesicular andesite. The clastic rocks predominate and are locally quite fossiliferous. The group is complexly folded, faulted and


BRITISH COLUMBIA
YUKON
ALBERTA
JUNEA
TELEGRAPH CREEK
FORT NELSON
PRINCE RUPERT
SMITHERS
DAVID MINERAL PROPERTY
P.G.E. R.R.
C.N.R.
PRINCE GEORGE
P.G.E. R.R.
C.P.R.
KAMLOOPS
VANCOUVER
KIMBERLEY
U.S.A.
HAZELTON
SMITHERS
16
97
1
3
93

intruded by a few thin sills of hornblende diorite. The younger rocks belong to the Sustut Group (Cretaceous and Tertiary) and include cross-bedded arkose, conglomerate, quartzite and siliceous tuffs. The Sustut, which is confined to the western portion of the property along the shore of Morrison Lake, strikes north-northwesterly and dips steeply to the east. It appears to be locally dreg folded near its north-northwesterly striking faulted contact with the older assemblage.

1970 PROGRAM

In 1969, David Minerals Ltd. (the property vendors) surveyed the claim group with helicopter-mounted magnetic and electromagnetic equipment. Two areas of possible interest were outlined. Subsequent follow-up during 1970, which is the subject of this report, included the establishment of 35 line miles of cut grid and 42 line miles of flagged grid. This grid was soil sampled and surveyed with induced polarization and VLF-EM equipment. All survey work was done by experienced Evergreen Exploration personnel under the writer's supervision.

GEOCHEMISTRY

SOIL SURVEY

SAMPLING PROCEDURE AND ANALYSIS

Soil samples were collected at 200 ft. stations on the grid. They were taken by shovel from the "B" horizon, placed in wet strength paper bags, partially dried at room temperature, and shipped to Barringer Research Laboratory in Vancouver, where they were analyzed for total Cu and Mo. The results are plotted on Maps 2 and 3 which accompany this report. The analytical procedure used by Barringer is described in Appendix I.

RESULTS

The copper and molybdenum values are generally uniformly low and spotty. Most areas of over 40 ppm correlate with swampy areas or other topographic lows and the lower slopes of hillsides where the soils would be expected to contain more copper. Topographic highs, where bedrock outcrops are mostly very low in copper.

The copper in the soils bear out the lithologic differences between the younger arkose sequence and older greywacke volcanic mudstone sequence. The soils on the older rocks show generally slightly higher copper values. An increase in overburden thickness in the northern part of the area also shows in the copper values. The values are generally lower except in swampy areas. Over a known showing of

very sparse chalcopyrite mineralization, the copper content of the soils shows no appreciable increase above background values. In most cases, molybdenum in the soils was very low and uniform.

GEOPHYSICS

RADEM SURVEY

EQUIPMENT AND SURVEY

The Radem unit used in the survey is a 1-man EM radio receiver utilizing the 12 to 24 kilocycle United States Naval Communication Broadcast Stations. It was built by Crone Geophysics Limited, 3607 Wolfedale Road, Mississauga, Ontario. The instrument utilizes higher than normal EM frequencies and is capable of detecting disseminated sulfides. However, due to the high frequency, it is affected by clay and other conductive overburden. Also, experience indicates that the numerous weak conductors usually present in a "porphyry environment" are masked by 50 ft. or more of cover even if it doesn't contain conductive layers. Some type curves and specifications are included as Appendix II of this report.

Readings were taken using the Cutler, Maine, Station (17.8 Kc) and Seattle, Washington (18.6 Kc). Both in-phase (dip angle) and out-of-phase (HF field strength) readings were recorded. The out-of-phase is a better measure of the intensity of conductivity than is the dip angle. However, the field strength response is a function of the transmitter power (which fluctuates daily) as well as the intensity of nearby conductivity. The results of the radem survey are plotted on Maps 4 to 7 which accompany this report.

A few lines on the south grid were surveyed with a Ronka EM16, also using the Cutler and Seattle Stations.

RESULTS

Optimum coupling is obtained when the bearing from the operator to the transmitter is parallel to the strike of the conductor. Therefore, strong planar conductors such as massive sulfide veins and graphitic sediments will usually give a much stronger response on only one of a pair of orthoganal (or nearly so) frequencies such as Seattle and Cutler. Where conductive fractures are multi-directional, such as in a "porphyry environment," the responses from all the VLF frequencies are similar. Although Cutler and Seattle are not quite orthoganal, an anomalous area indicated by only one of the frequencies is very likely planar.

In general, the VLF responses on the Spark and Joy claims indicate fairly shallow cover (50 ft. or less) over most of the grid area except around the three small lakes between 64 North and 96 North and at the north end of the grid. Although many crossovers were found, only one area appears conductive on both frequencies and has associated out-of-phase response. This area of interest is centered on Line 120 North at 75 West. However, the response on Seattle is very much stronger than that on the Cutler frequency. This would indicate a strong planar conductor with a strike almost perpendicular to the bearing of Cutler from the property or roughly north-northeast.

Several narrow conductors just east of and parallel to the shore of Morrison Lake responded to the Seattle frequency only. Since there are several of them (i.e. 80 North at 109 West), they probably represent shearing in or weak conductivity within the northwest striking Sustut sediments.

I. P. SURVEY

EQUIPMENT AND SURVEY

A "Sabre" 500 watt pulse-type unit was used in the survey. This I.P. unit is manufactured by Sabre Electronics of Burnaby, B. C., and is powered by a 12 volt aircraft storage battery. Steel rods 4 ft. long by 1/2 in. diameter were used as current electrodes. The potential electrodes were two porous pots filled with a supersaturated copper sulfate solution. Where necessary, the current electrodes were "soaked down" with a soapy saline solution to reduce the contact resistance. Communication between the operator and electrode men was by walkie-talkie.

A 400 ft. Wenner Array was used in the survey with 200 ft. spreads used to check anomalous areas. Experience has shown that this unit is capable of penetration equal to the spread when using a Wenner array. At Newman (See Appendix III), a good response was obtained through 100 ft. (measured by several diamond drill holes along the profile) of cover on Line 25 East using a 400 ft. Wenner Array.

RESULTS

The chargeabilities and apparent resistivities recorded during the survey are plotted on Maps 8 and 9, which are enclosed in the pocket in the back of this report.

The southern part of the surveyed area does not have any areas of I.P. interest. Beginning at 42 North and about 50 West and extending northwesterly through the northern part of the property is a large zone of very low apparent resistivity which indicates a possible major geological change. Towards the northern limit of the survey, this low resistivity zone widens to about three-quarters of the length of the survey lines. An irregular area of chargeability highs from 45 West to 100 West on 120 North extends in a roughly triangular shape to 50 West on 152 North. The trend and continuity of this zone is not clear because the lines are interrupted by the swampy pond on Line 136 North.

Notably, two highs on Line 120 North (at 85 West and 95 West), within this triangular area are not repeated on either Line 116 or 124 North. Also, the extreme highs all disappeared when the 200 ft. array was used but the adjacent intermediate chargeabilities remained about the same for the shorter spread. Such erratic response is typical of graphite.

The eastern edge of this triangular area of interest has distinctly different I.P. characteristics from the highs noted above. The chargeabilities increase more smoothly and the highs can be traced from line to line suggesting a sulfide source. Also, this chargeability zone does not fall within the large formational resistivity low discussed previously. The zone has a general north-south trend from 144 North at 52 West to 116 North at 57 West. The chargeability intensity does not appreciably decrease at 200 ft. spreads indicating relatively shallow cover. The one exception to this is at 144 North, 52 West where

the response disappears at the 200 ft. spread. However, an esker was noted on the air photos indicating a local increase in overburden depth.

CONCLUSIONS

The southern part of the surveyed area is reasonably well exposed. What little cover is present would probably not mask a geochemical expression. Since not only the soils but also the radem and I.P. were not anomalous in this area, no further work is warranted.

Both the soil sample results and the radem profiles indicate an increase in overburden thickness over the northern portion of the property. A conductive and chargeable zone centered on Line 120 North at 75 West is probably due to a north-northeasterly trending zone of graphite.

The north-south trending I.P. zone through 144 North at 52 West is possibly due to sulfides under locally shallow cover. Although the soil samples were unanomalous, the terrain slopes gently to the northwest into an area of apparently greater overburden depths so that a geochemical expression could be masked.

Respectfully submitted,

R. W. Woolverton, P. Eng.

STATEMENT OF PROJECT CHARGES

(PER PRECEDING INVOICES)

Evergreen Explorations Ltd. - January invoice	$21,578.85
Trans-Provincial Airlines Ltd.	35.52
" " " "	54.60
" " " "	62.40
" " " "	78.00
" " " "	125.00
" " " "	80.00
" " " "	58.00
" " " "	114.00
Indian River Exploration Services	3,262.50
" " " "	2,420.53
" " " "	600.00
" " " "	2,400.00
North Coast Air Services Ltd.	99.00
Alpine Helicopters Ltd.	326.25
Okanagan Helicopters Ltd.	900.85
Barringer Research Limited	395.90
" " "	1,240.70
" " "	1,531.80
" " "	1,860.00
TOTAL	$37,223.90

The undersigned considers the above charges applicable as assessment work.

R. W. Woolverton, P. Eng.

APPENDIX I

GEOCHEMICAL ANALYTICAL PROCEDURE

BARRINGER RESEARCH INC.

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

December 8th, 1969

Evergreen Explorations Limited
635-789 W. Pender Street
Vancouver 1, B.C.

Attention: Mr. Woolverton

Dear Sir:

Our laboratory procedures for your samples are as follows:-

Total Copper (soils) - a portion of -80M material is digested in concentrated perchloric acid, diluted with water and analysed by atomic absorption.

HCl copper (stream sed.) - same as above but using a dilute solution of hydrochloric acid.

Total Molybdenum - a -80M portion of sample is fused with a carbonate flux and the molybdenum is colorimetrically determined using zinc dithiol.

Total copper was done on the "Donna" and "Red Top" projects and both total copper and moly on the "Allie". Our reports 168-B (for total copper) and 161-B (for HCl copper) had no project no. specified on the work order form received from you.

Should you require any further information, please do not hesitate to contact me.

Yours sincerely
BARRINGER RESEARCH LIMITED

Y. M. Hazeldene

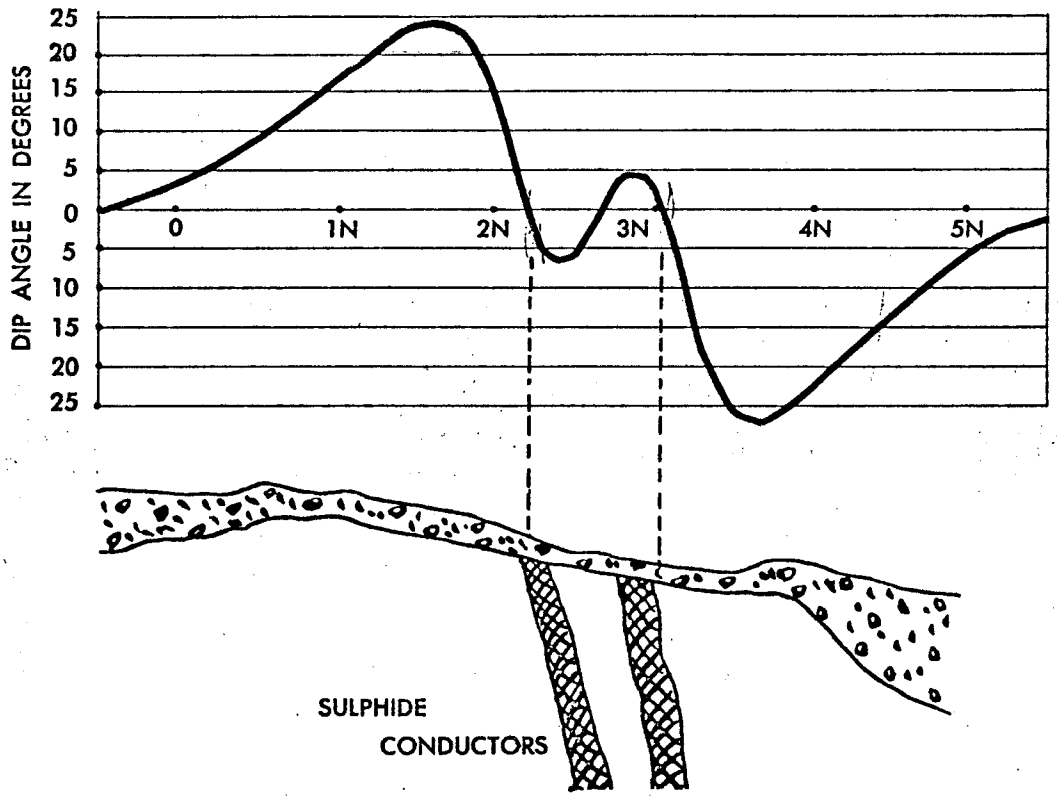
Yvonne Hazeldene
Chief Analyst
Department of Geochemistry

YH:lh

APPENDIX II

RADEM SPECIFICATIONS

Example of a RADEM traverse over a Banded Conductor in the Timmins area of Ontario.



SPECIFICATIONS

READOUT — Dip angle of resultant VLF magnetic field component from an inclinometer of ± ½ degree sensitivity

NULL INDICATOR — Both audio (loudspeaker) and visual by means of an averaging field strength meter

TUNING — Preset switch tuning

BATTERIES — 2 of 9 volt Eveready # 216, independent test indicators

STATIONS — Standard 5 stations — Cutler, Maine 17.8; Seattle, Wash. 18.6; Ft. Collins, Colorado 20.0; Annapolis, Md. 21.4; Balboa, Panama 24.0 KCs.

— Optional — N.W. Cape, Australia 15.5; Lualualei, Hawaii 23.4; Rugby, England 16.0 KCs.
Other stations as they become operational

WEIGHT — Receiver — 4 lb. Leather Case — 2 lb. Shipping Weight — 15 lb.

PRICE — $2,250.00 Canadian

RENTAL — $150.00 per month

FIGURE 2.

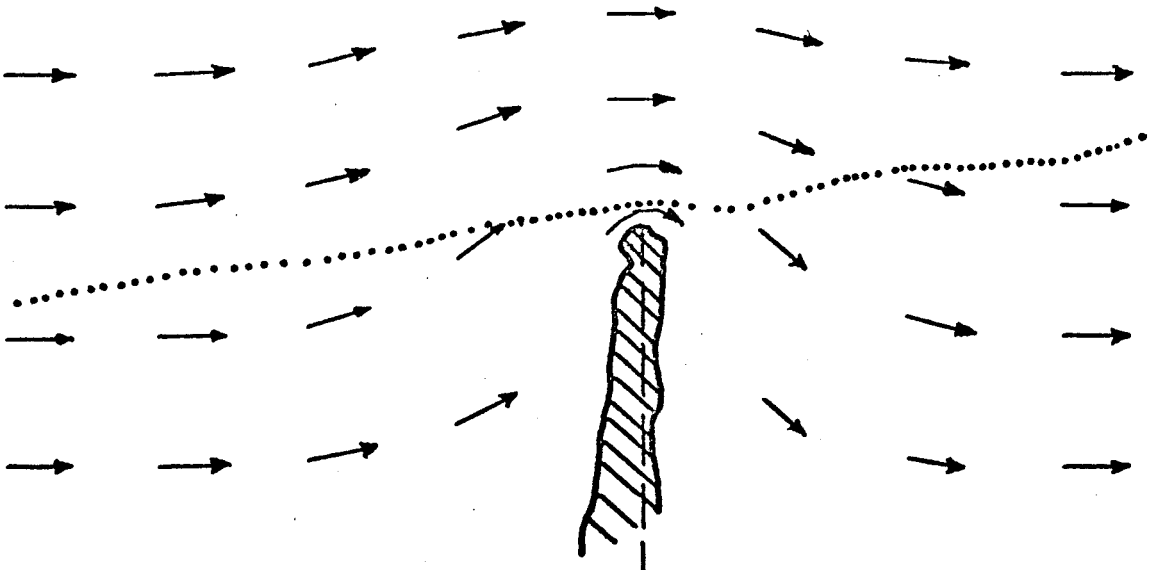
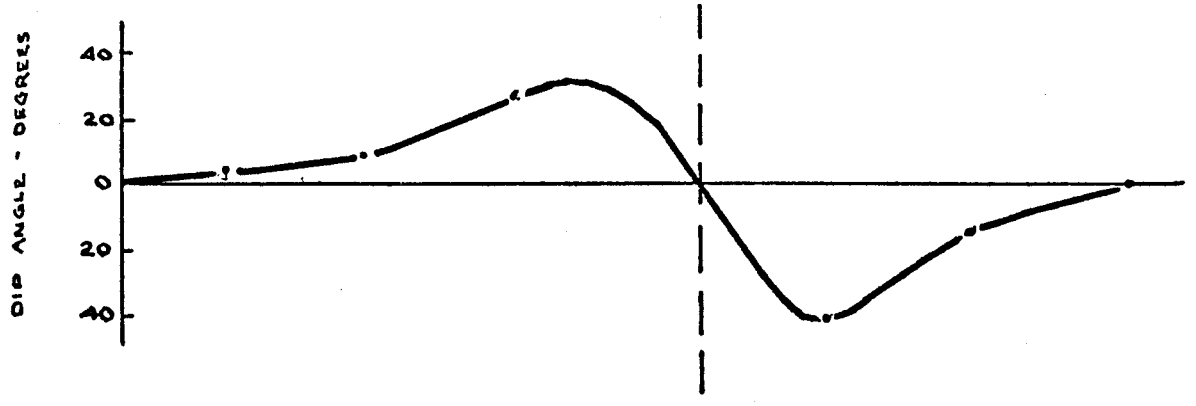


FIGURE 3.

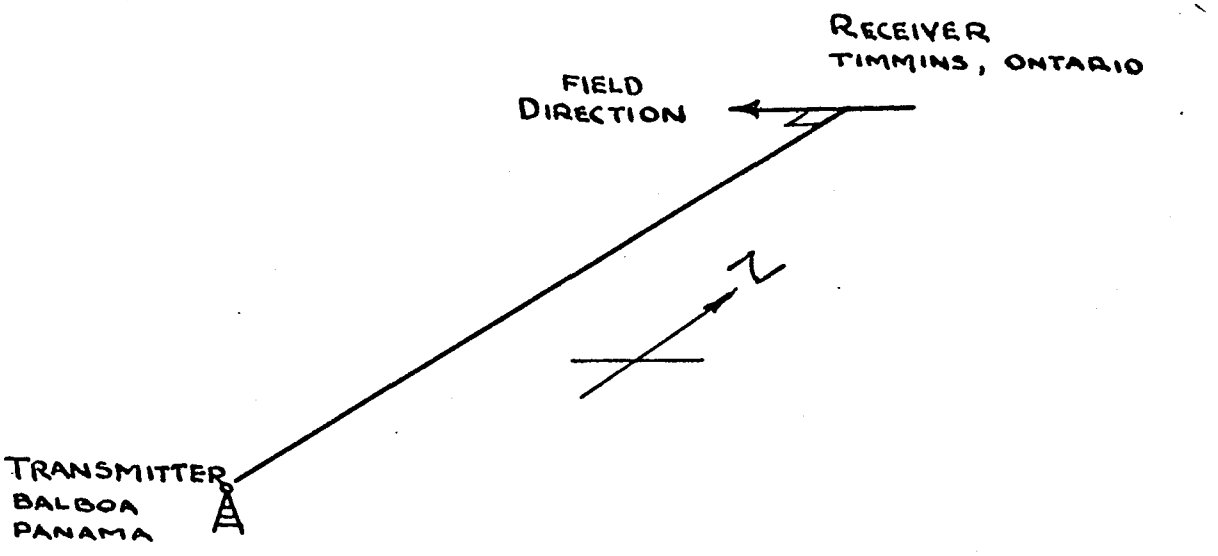


THE VERY LOW FREQUENCY RADIO TRANSMITTING STATIONS

The purpose of these stations is to broadcast over large distances navigational and other information for use by ships and submarines. Numerous stations are situated around the globe and a considerable number are in the process of construction. Operational stations are located at Cutler Maine, Annapolis Maryland, Fort Collins Colorado, Seattle Washington, Balboa Panama, Rugby England, Lualualei Hawaii, Guam and N.W. Cape Australia. The frequency range used varies between 12 and 24 KC's and is thus 10 times higher than the normal frequencies used in mineral prospecting. This results in the RADEM method being more sensitive to lower conductivity and smaller sized bodies than normal EM equipment.

The direction of the magnetic component of the field from a VLF station is horizontal and perpendicular to the line between the operator and the transmitting station (see Figure 4). In this example

FIGURE 4.



the receiver at Timmins, Canada, is using the Panama Station that is due south of Timmins. The normal field direction in this case will be horizontal in an east-west direction. This field would couple with a north-south striking conductor. Thus for maximum coupling and therefore best results select a transmitter station located in the same direction as the geological strike. With the Timmins, Ontario, example Panama should be used in areas of north-south geological strike and Seattle Washington in areas of east-west strike. If the geological strike is not known then it is best to read two stations that are located in directions perpendicular to each other.

The U.S. naval VLF stations are shut down for periods of 4 to 8 hours every week for routine maintenance. This shutdown schedule is published by the U.S. Navy and is forwarded to RADEM users by Crone Geophysics.

OPERATION OF THE RADEM RECEIVER:

- Turn the unit ON by means of the ON-OFF switch. This can be left on all day since the battery drain is very low.
- Turn the station selector switch to the station you wish to use.
- Adjust the volume control knob such that the signal can be clearly heard.

CRONE GEOPHYSICS LIMITED

979 LAKESHORE ROAD E.
PORT CREDIT, ONTARIO

TELEPHONE 274-3704

CASE HISTORY # 1 March 1, 1968

Two Radem (VLF Radio EM) Traverses in the Timmins Area, Ontario.

The use of the VLF radio transmitters as an EM primary field source is not new, but rather one of the oldest and earliest (1929) EM methods. The recent revival of this method is due to the greatly increased power and reliability of the transmitter stations. The method still has, however, its original advantages and limitations. If used properly it can be very effective; if pushed beyond its basic limitations disappointing results will be obtained. The following two profiles illustrate this point.

The first profile, over the Canadian Jamieson Mine near Timmins, illustrates the ability of the method to detect the three in echelon ore bodies. This is rather remarkable from three aspects: 1) no other EM method (horizontal loop, vertical loop - fixed and broadside, or JEM) was capable of detecting even one of these ore lenses; 2) the traverse crossed the yard of a producing mine, thus operating in an area of high hydro noise; 3) the dip angles obtained were very large, +30° to -30°.

The ore lenses are excellent conductors, but were not detected by previous EM surveys, due to their being discontinuous and of limited size.

The second profile, also from the Timmins area, is a traverse over a strong conductor buried below 75 ft. of clay and sand overburden. The RADEM profile fails to detect the conductor which is clearly outlined by the dual frequency vertical loop survey. (Note: The ratio of low frequency, 480 cps, to high frequency, 1800 cps, is unity.) This illustrates the inability of the VLF - EM method to penetrate the overburden. The VLF - EM method will produce large tilt angles from the clay bed itself. These large angles will occur towards the edge of the clay bed and thus complicate interpretation in these areas.

Conclusion: The VLF - EM method is a highly effective and rapid reconnaisance tool. It is limited by its high frequency and the inability to interpret from the results the conductivity and shape of the conductor. Until more experience is gained, this method should be used in shallow (less than 30 ft.) overburden areas.

J. Duncan Crone

J. Duncan Crone,
Geophysicist.

CASE HISTORY # 1

RADEM PROFILES OVER CANADIAN JAMIESON MINE, TIMMINS, ONTARIO.

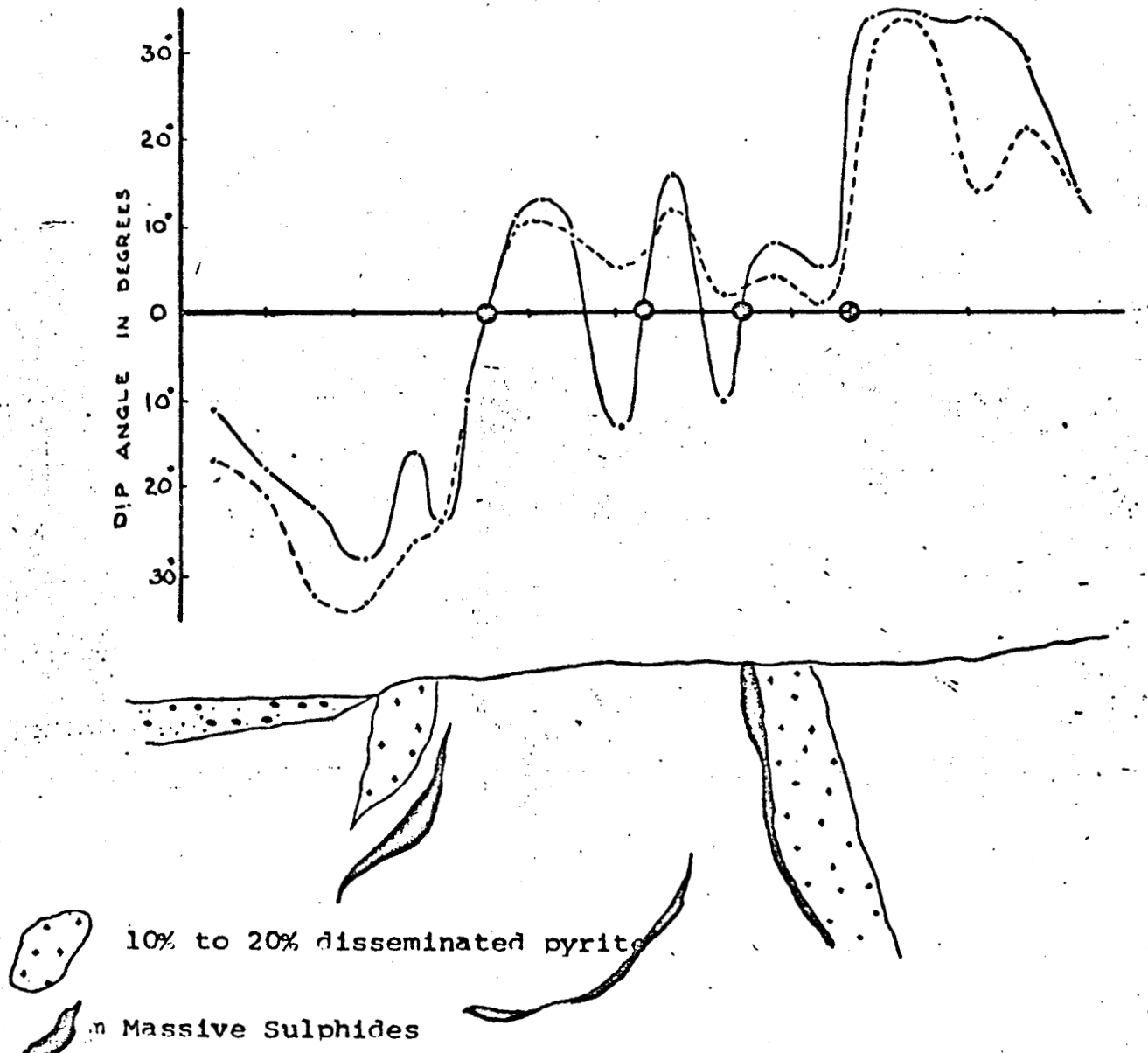
Scale 1" = 20°; 1" = 200'

—·—·— Annapolis 21.4 kcs

- - - - - - Panama 24.0 kcs

—⊙— True Cross-Over

—⊖— Indicated Cross-Over



10% to 20% disseminated pyrite

Massive Sulphides

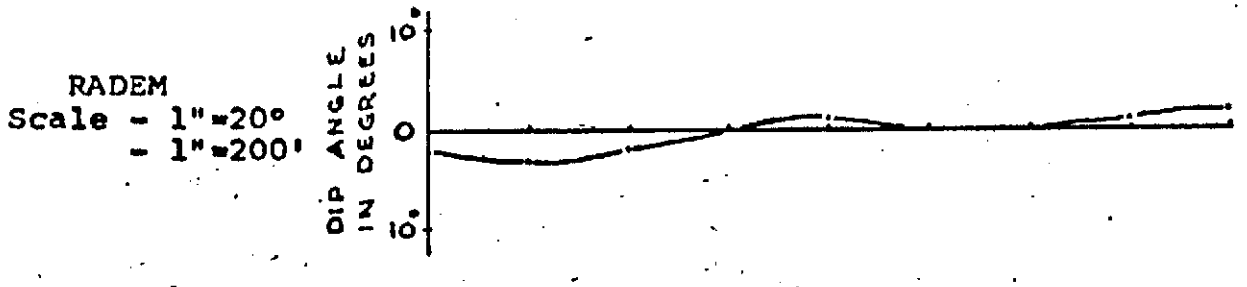
Sizes of ore lenses - 105,000, 135,000 and 280,000 tons

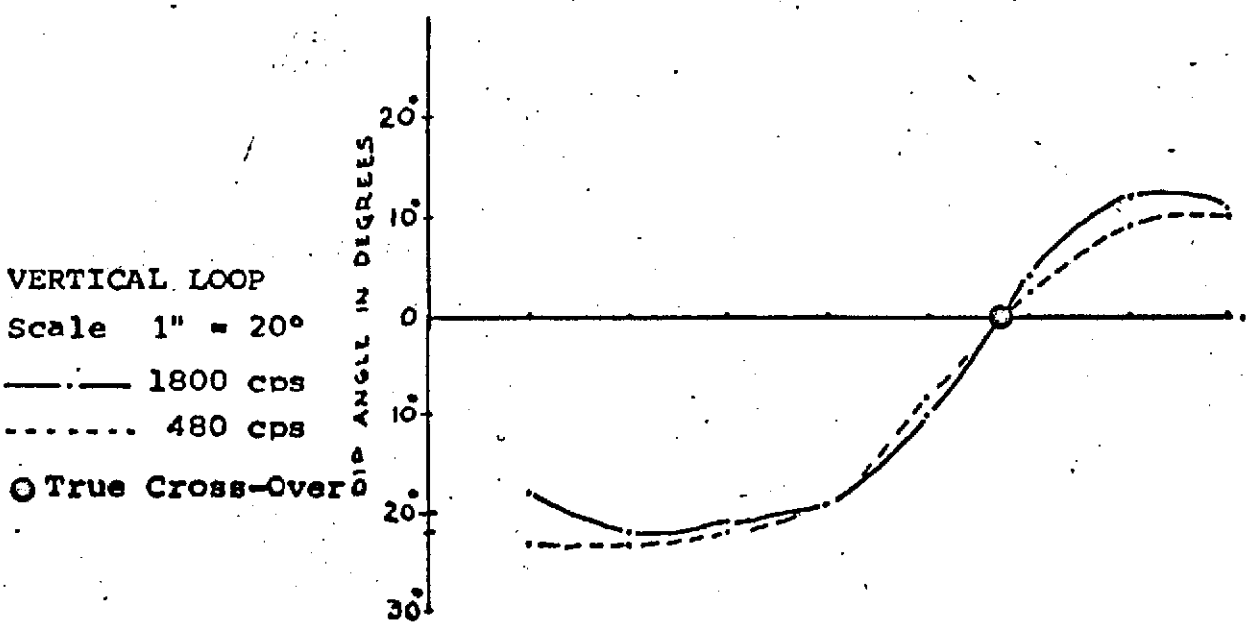
Only one of the ore lenses outcrops

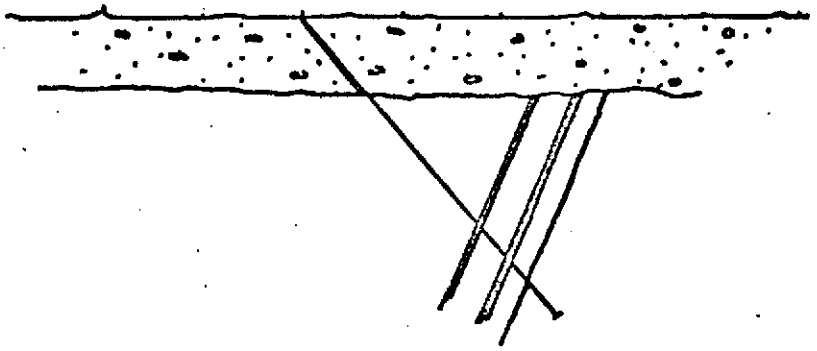
Overburden is shallow over mineralized area.

CASE HISTORY # 1

RADEM AND DUAL FREQUENCY VERTICAL LOOP TRAVERSES OVER AN EXCELLENT CONDUCTOR BURIED AT MODERATE DEPTH (75'), TULLY TOWNSHIP, TIMMINS, ONTARIO.







Graphitic conductor with 10% pyrite

Depth of overburden = 75'

Overburden extends for at least one mile in all directions

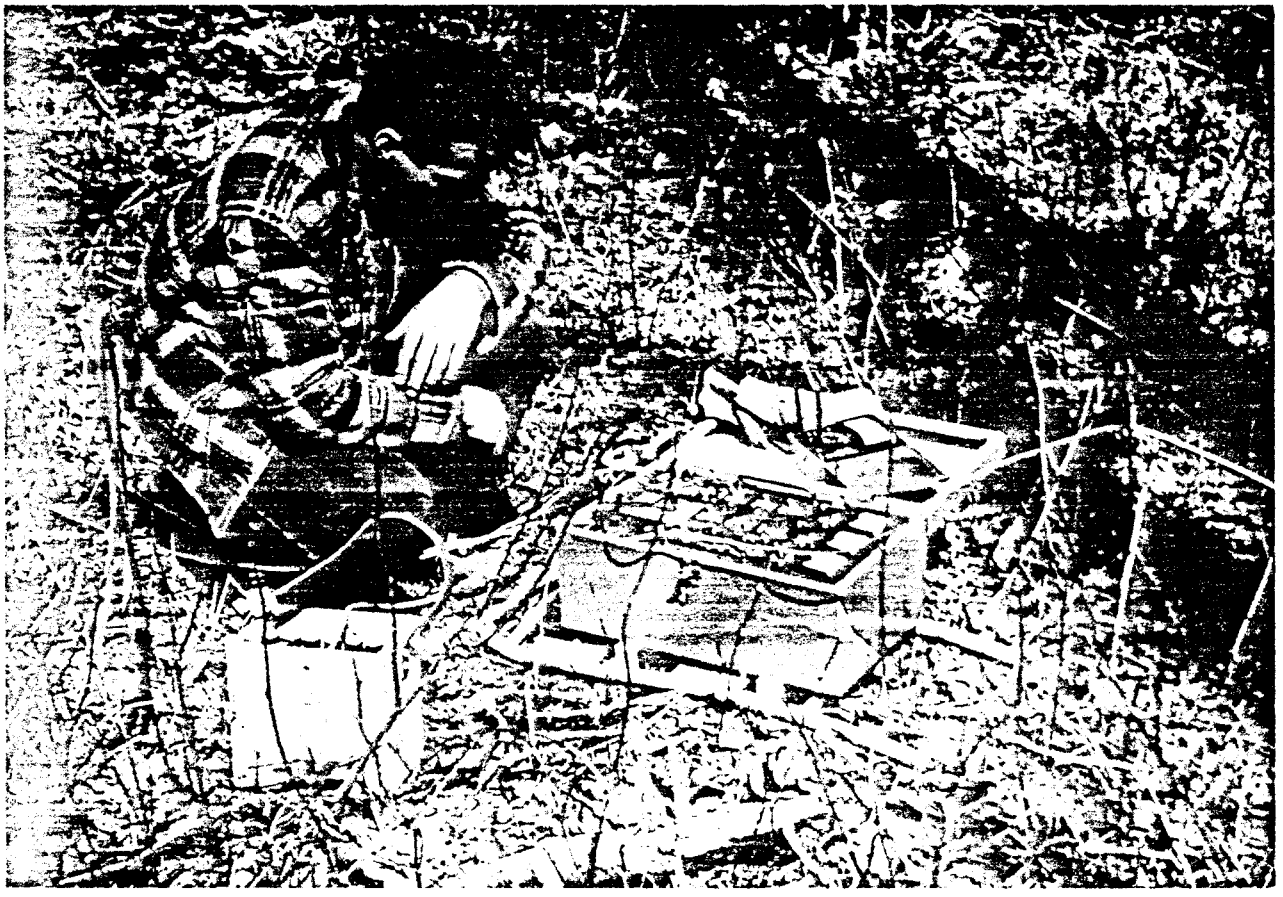
APPENDIX III

"SABRE" I. P. SPECIFICATIONS

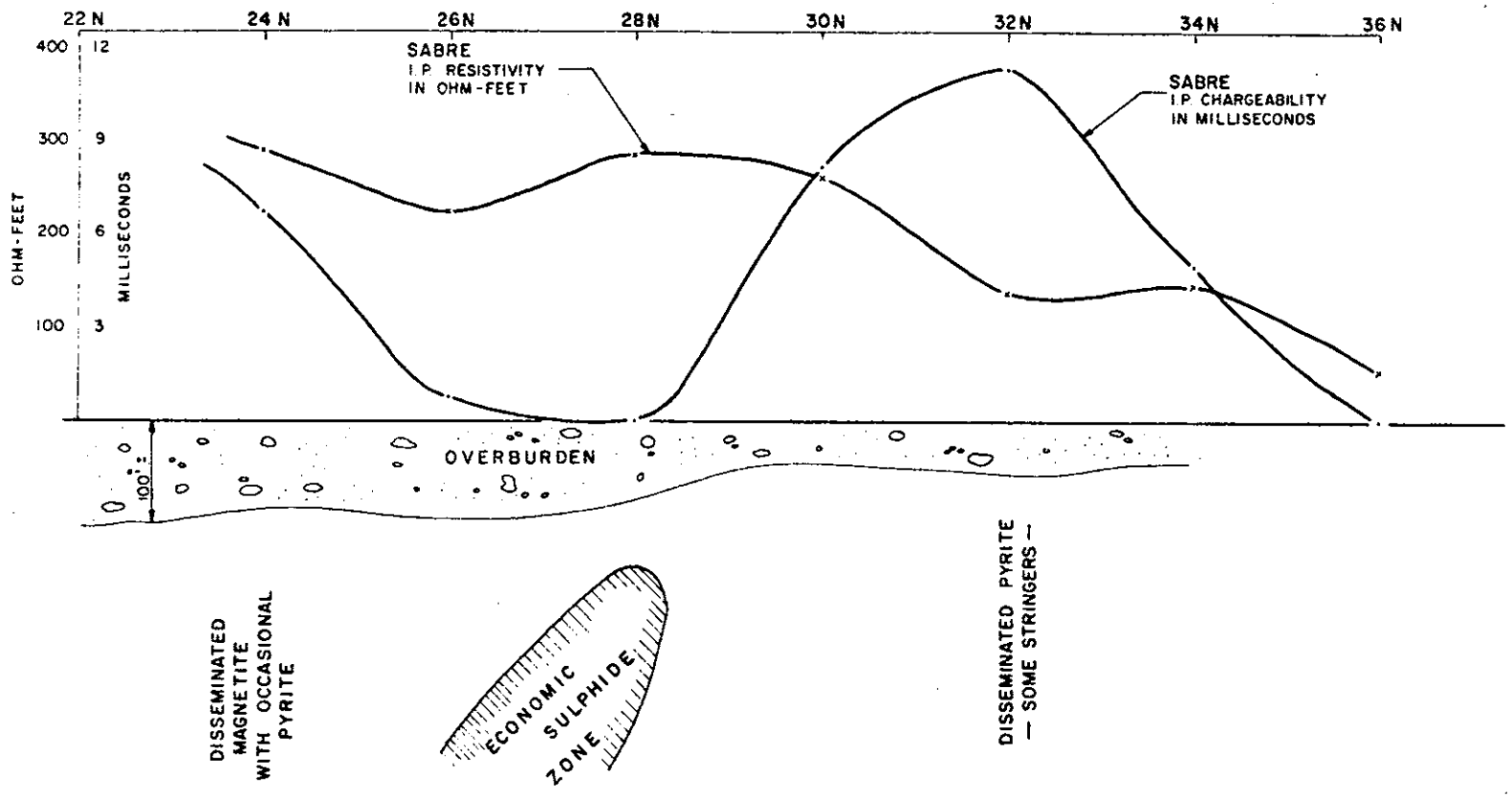
INDUCED POLARIZATION:

The Sabre Portable Pulse Type instrument is a 500 watt unit capable of 3 or 4 hundred foot penetration as shown on the accompanying profiles. Very little reduction in anomaly intensity was noted over the northern limb of Noranda's Newman ore body, where it is covered by 100 feet of glacial till.

Because of its light weight, the "Sabre" is ideal for reconnaissance work. Using a 400 foot Wenner array, Radem (V.L.F./E.M.), and Magnetometer readings can be taken, soil samples collected, and the chargability and resistivity determined by a 4 man crew simultaneously in open bush without pre-existing lines. Cut lines are necessary only in areas of high magnetic intensity where it is impossible to maintain a straight line by compass.

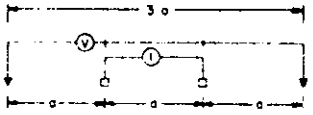


The "SABRE" at NEWMAN



INSTRUMENT

SABRE - PORTABLE PULSE TYPE
500 WATTS a = 400' WENNER ARRAY



NOTE:

GEOLOGICAL DATA COURTESY OF
NORANDA EXPLORATION Co. LTD.

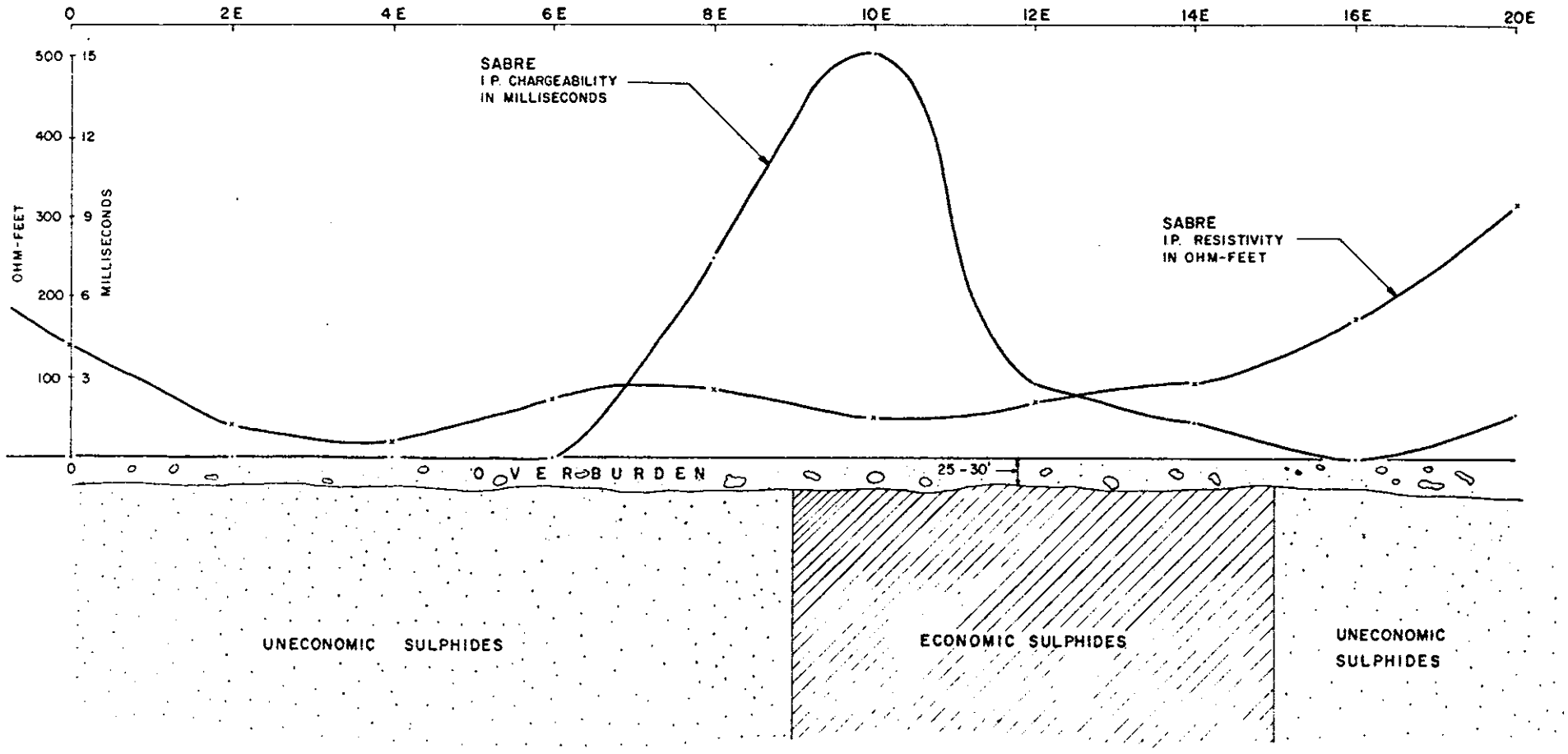
LINE 25 E

NEWMAN PROPERTY

AT

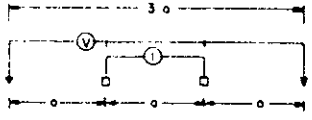
BABINE LAKE, B.C.

Evergreen Explorations Ltd.



INSTRUMENT

SABRE - PORTABLE PULSE TYPE
500 WATTS a = 400' WENNER ARRAY



NOTE:

GEOLOGICAL DATA COURTESY OF NORANDA EXPLORATION Co LTD.

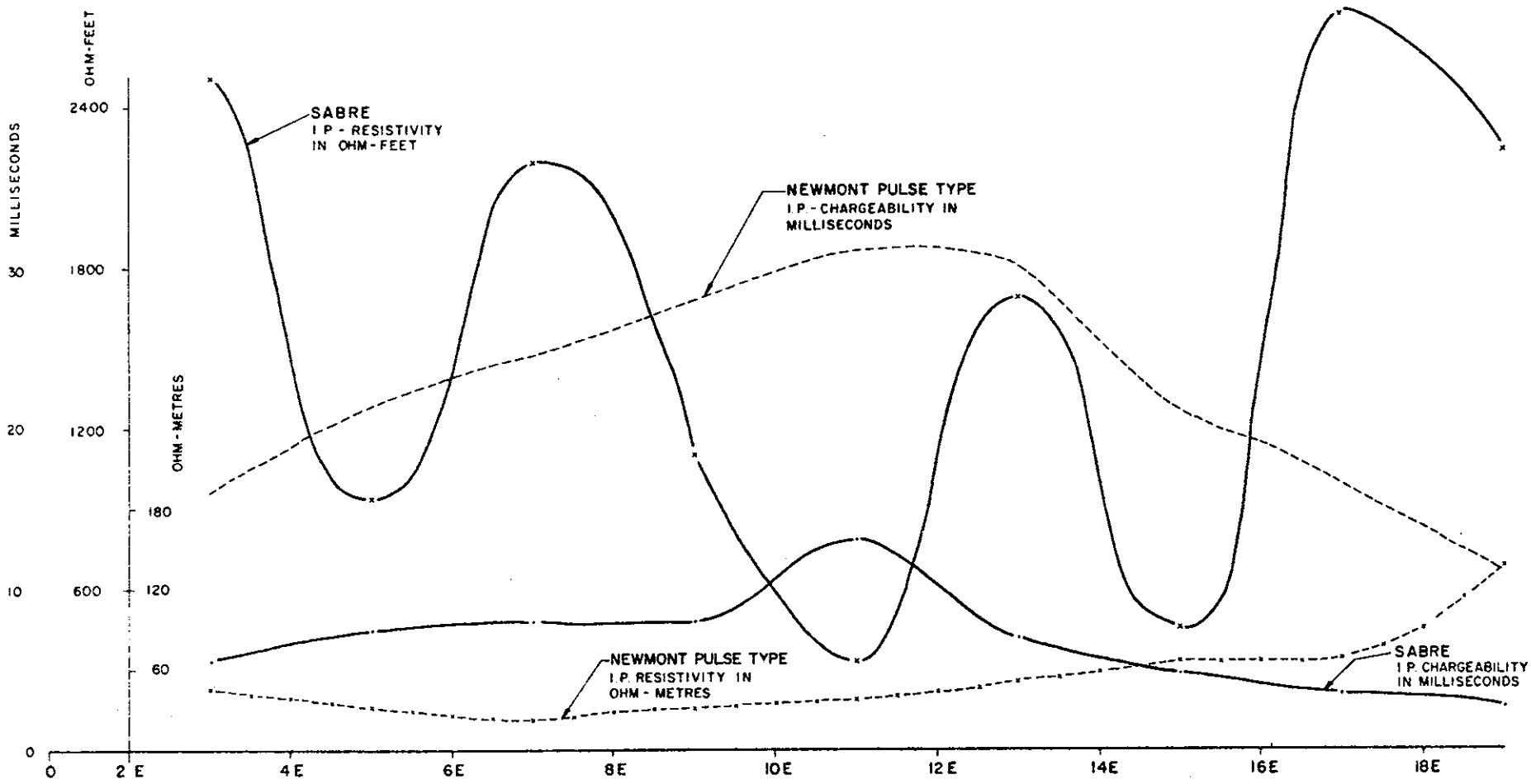
LINE 20 N

NEWMAN PROPERTY

AT

BABINE LAKE, B.C.

Evergreen Explorations Ltd.



INSTRUMENTS

SABRE - PORTABLE PULSE TYPE
500 WATTS a = 200' WENNER ARRAY

NEWMONT - PULSE TYPE
7500 WATTS n = 1, a = 200' POLE-DIPOLE

NOTE

SURVEY PERMISSION COURTESY OF
CYPRUS EXPLORATION CORPORATION LTD.

LINE 16 N

BIG ONION PROSPECT

AT

SMITHERS, B.C.

Evergreen Explorations Ltd.

APPENDIX IV

DECLARATION OF EXPENDITURES

Evergreen Explorations Ltd.

- R. WOOLVERTON
  GEOLOGIST, P.ENG.
- R. C. O'BRIEN
  FIELD SUPERVISOR
- JOHN C. OSWALD & CO., C.A.'s
  ACCOUNTANTS:

635 - 789 W. PENDER ST.
VANCOUVER 1, B.C., CANADA

CONTRACT EXPLORATION

- 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998
- P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

January 11, 1971.

Palisade Exploration Corporation Ltd.,
c/o Cyprus Explorations Corp. Ltd.,
510 West Hastings Street,
Vancouver 2. B.C.

I N V O I C E (David Project)

Geochemical and geophysical survey at Morrison Lake, B.C., per contract as follows -

125 line miles @ $130/mile		$ 16,250.00
365 man days room and board @ $7/day		2,555.00
		18,805.00

Disbursements	Chq. #		
Trans-Provincial Airlines	782	$ 140.00 V	
Trans-Provincial Airlines	806	142.00 V	
Trans-Provincial Airlines	836	135.00 V	
B.C. Telephone Co.	854	20.50 V	
Trans-Provincial Airlines	864	207.70 V	
Greyhound Lines	R.W. #27	8.65 V	
Okanagan Helicopters	874	1,745.00 V	
Alpine Helicopters	875	300.00 V	
Trans-Provincial Airlines	893	45.00 V	
Greyhound Lines	R.W. #28	30.00 V	2,773.85
			21,578.85

Less received on account from
Cyprus Explorations Corp. Ltd. -

1970		
October 30th	$ 5,130.00	
December 9th	10,295.00	15,425.00
		$ 6,153.85

V - copies of invoices attached

E & O E

John C Oswald & Co.
Accountants

Trans-Provincial Airlines Ltd.

CHARTER AND CONTRACT TICKET

Report Number | Invoice Number

Charge to: Cypress Exploration

Date 20/9/70	Cash	Phone
A/C Type Beaver	CF- JOS	Warrant or Reg. No.
Base	Pilot	

From: | To (1)

To (2) | To (3)

To (4) | To (5)

FARE 70 Miles @ $ .78	$ 54.60
Hours @ $	
Contract Rate	
Waiting Time @ $	
Extra Landings @ $	
Pilot Expenses	
Other	
TOTAL CHARGES	$ 54.60 ✓

Authorized By

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED: (PASSENGERS' SIGNATURES)

1 | 7
2 | 8
3 | 9
4 | 10
5 | 11
6 | 12

RECEIVED OCT 5 - 1970

Nº 15155

Trans-Provincial Airlines Ltd.

CHARTER AND CONTRACT TICKET

Flt. Report Number | Invoice Number

Charge to: Cypress ~~Exploration~~ Exp. Corp

Date	Cash	Phone
A/C Type Super cub	CF- JUE	Warrant or Reg. No.
Base McLure	Pilot	

From: McLure | To (1) Morrison

To (2) | To (3)

To (4) | To (5)

FARE 96 Miles @ $ .37	$ 35.52
Hours @ $	
Contract Rate	
Waiting Time @ $	
Extra Landings @ $	
Pilot Expenses	
Other	
TOTAL CHARGES	$ 35.52 ✓

Authorized By R Woolsey

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED: (PASSENGERS' SIGNATURES)

1 R. W | 7
2 | 8
3 | 9
4 | 10
5 | 11
6 | 12

RECEIVED OCT 5 - 1970

Nº 15129

Tran. Provincial Airlines Ltd.

Flt. Report Number	CHARTER AND CONTRACT TICKET	Invoice Number

Charge to: [illegible]

Date 8/11/70	Cash		Phone
A/C Type Super	CF- [illegible]		Warrant or Reg. No.
Base [illegible]	Pilot [illegible]		

From: [illegible] To (1) [illegible]

To (2) [illegible] To (3)

To (4) To (5)

FARE [illegible]	Miles @ $ [illegible]	$ 78.00
	Hours @ $	
Contract Rate		
Waiting Time	@ $	
Extra Landings	@ $	
Pilot Expenses		
Other		
	TOTAL CHARGES	$ 78.00

Authorized By [illegible]

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1 [illegible] 7

2 [illegible] 8

3 9

4 10

5 11

6 12

RECEIVED OCT 1 - 1970

No. 14878

Trans-Provincial Airlines Ltd.

Flt. Report Number	CHARTER AND CONTRACT TICKET	Invoice Number

Charge to: [illegible]

Date 6/10/70	Cash		Phone
A/C Type C-185	CF- [illegible]		Warrant or Reg. No.
Base	Pilot [illegible]		

From: [illegible] To (1) [illegible]

To (2) [illegible] To (3)

To (4) To (5)

FARE [illegible]	Miles @ $ .40	$ 62.40
	Hours @ $	
Contract Rate		
Waiting Time	@ $	
Extra Landings	@ $	
Pilot Expenses		
Other		
	TOTAL CHARGES	$ 62.40

Authorized By [illegible]

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1 7

2 8

3 9

4 10

5 11

6 12

RECEIVED JUN 29 1970

No. 14396

Dow. 143

Trans-Provincial Airlines Ltd.

CHARTER AND CONTRACT TICKET

Flt. Report Number

Invoice Number

Charge to: CYPRUS EXPL CORP. LTD.

Date Aug 23rd	Cash	Phone	
A/C Type Beaver	CF- Joi	Warrant or Reg. No.	
Base YD	Pilot J.M. Arsenault		
From: Smithers	To (1) Morrison		
To (2) Smithers	To (3)		
To (4)	To (5)		

FARE 100	Miles @ $ 80		$ 80.00
	Hours @ $		
Contract Rate			
Waiting Time	@ $		
Extra Landings	@ $		
Pilot Expenses			
Other			
	TOTAL CHARGES		$ 80.00

Authorized By Pete Bland

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1	7
2	8
3	9
4	10
5	11
6	12

David M.
143

No. 14953

Trans-Provincial Airlines Ltd.

CHARTER AND CONTRACT TICKET

Flt. Report Number

Invoice Number

Charge to: [illegible]

Date [illegible]	Cash	Phone	
A/C Type [illegible]	CF- [illegible]	Warrant or Reg. No.	
Base [illegible]	Pilot [illegible]		
From: [illegible]	To (1) Morrison (R...)		
To (2) [illegible]	To (3)		
To (4)	To (5)		

FARE 100	Miles @ $ 1.10		$ 110.00
	Hours @ $		
Contract Rate			
Waiting Time	@ $		
Extra Landings	@ $		
Pilot Expenses			
Other [illegible] Min			15.00
	TOTAL CHARGES		$ 125.00

Authorized By Pete Bland

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1	7
2	8
3	9
4	10
5	11
6	12

David M

No. 14685

Trans-Provincial Airlines Ltd.

Flt Report Number

CHARTER AND CONTRACT TICKET

Invoice Number

Charge to: CYPRUS MINES

Exploration

Date Oct 6 | Cash | Phone

A/C Type C-185 | CF- YYM | Warrant or Reg. No.

Base McLure | Pilot CAMERON

From: McLure To (1) Morrison

To (2) McLure To (3)

To (4) To (5)

FARE 96	Miles @ $ .60	$ 58.00
Contract Rate	Hours @ $	
Waiting Time	@ $	
Extra Landings	@ $	
Pilot Expenses		
Other		
	TOTAL CHARGES	$ 58.00

Authorized By C McFall

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1 Mark Wilson
2 Gregg Wilson
3
4
5
6

7
8
9
10
11
12

RECEIVED
OCT 29 1970
REGINA

Dow. 143

No 13862

Trans-Provincial Airlines Ltd.

Flt Report Number	CHARTER AND CONTRACT TICKET	Invoice Number

Charge to: CYPRUS

Date	Cash	Phone
A/C Type	CF-	Warrant or Reg. No.
Base	Pilot	

From: [illegible] To (1) [illegible]

To (2) [illegible] To (3)

To (4) To (5)

FARE	Miles @ $	$
	Hours @ $	
Contract Rate		
Waiting Time	@ $	
Extra Landings	@ $	
Pilot Expenses		
Other		
	TOTAL CHARGES	$

Authorized By

THIS TICKET IS EXPRESSLY SUBJECT TO THE CONDITIONS PRINTED ON THE REVERSE SIDE OF TICKET AND WHICH ARE HEREBY ACCEPTED (PASSENGERS' SIGNATURES)

1	7
2	8
3	9
4	10
5	11
6	12

No 15058

Sept. 10th - Oct 30th 1970

M. Cyprus Exploration Corporation Ltd.

DH'D # 142

1101-510 West Hastings St.
Vancouver 2 B.C.

In account with Sabian River Exploration Services
Box 635
Smithers B.C.

Terms

	Project 143 Morrison Lake					
	6½ miles of cut line @ $125.00 per mile				$812	50
	25 miles flag and blazed lines @ $75.00 per mile				1875	00
	5½ miles line chopped with axes @ $100.00 per mile				550	00
	Cut 1 helicopter pad				25	00
				TOTAL	$3262	50

APPROVED
[illegible]

Aug.21 - Sept. 9 1970

M Cyprus Exploration Corporation Ltd.
1101 - 510 West Hastings Street
Vancouver 2, B.C.

In account with Indian River Exploration Services
Box 635, Smithers, B.C.

Terms Please expedit

Project 143	
Morrison Lake	
12 miles cut grid lines @ 125.00 per mile	1500.00
11 miles blazed and flagged line @ 75.00 per mile	825.00
1 mile access trail	100.00
Total	2425.00
Less: Attached Bill	4.47
	2,420.53

RECEIVED
SEP 28 1970

APPROVED
NOV 2 1970

Aug 12th — Nov 12th 1970

M Cyprus Exploration Corp. Ltd. "142
1101 - 510 West Hastings St.
Vancouver B.C.

In account with Indian River Exploration Services
Box 635
Smithers B.C.

Terms

		3 months boat rental @ 75.00 per month			$ 225	00
		3 months rent for 10 H.P. Outboard motor @ 125.00 per month			$ 375	00
					600	00

AUG 7TH - AUG 21ST 1970

M CYPRUS EXPL. CORP LTD

In account with INDIAN RIVER EXPLORATION SERVICES
BOX 635 SMITHERS B.C.
(PER PETE BLAND)

Terms

PROJECT #143 MORRISON LAKE	
15 MILES CUT GRID LINES @ $125 PER MILE	$1875 00
7 MILES OF BLAZED AND FLAGGED GRID LINES @ $75 PER MILE	$525 00
TOTAL	$2400 00

NORTH COAST AIR SERVICES LTD.

~~P.O. BOX 610 — PRINCE RUPERT, B.C.~~
P.O. Box 385 Smithers B.C.

Charter and Contract Ticket

Flt. Report Number	TELEPHONES: 624-6452 AND 624-6434	Invoice Number

Charge to: ~~EXPLOR~~ CYPRUS EXPLORATION
801-510 W Hastings, Van. B.C.
DAVID MINERAL PROJECT.

Date AUG. 29/70	Cash	Phone
A/C Type CESSNA	CF– YZS	Warrant or Reg. No.
Base SMITHERS	Pilot J. HODGE	

From: SMITHERS To (1) MORRISON
To (2) SMITHERS To (3) MORRISON
To (4) SMITHERS To (5)

FARE 180	Miles @ $ 55	$ 99.00
	Hours @ $	
	Contract Rate	
Waiting Time	@ $	
Extra Landings	@ $	
Pilot Expenses		
Other (Including Gas Surcharges, Etc.)		
	TOTAL CHARGE	$ 99.00

Authorized [signature]

RECEIVED SEP 28 1970

This ticket expressly subject to the conditions printed on the reverse side of this ticket and which are hereby accepted: (Passenger signatures)

For Office Use Only

A No 445

Alpine HELICOPTERS LTD

P O B X 208 KELOWNA BRITISH COLUMBIA

CYPRESS EXPLORATION CORP. LTD.,
822 - 510 W. HASTINGS ST.,
VANCOUVER 2, B.C.

INVOICE NO K 2022

DATE SEPTEMBER 17, 1970

CONTRACT NO F800

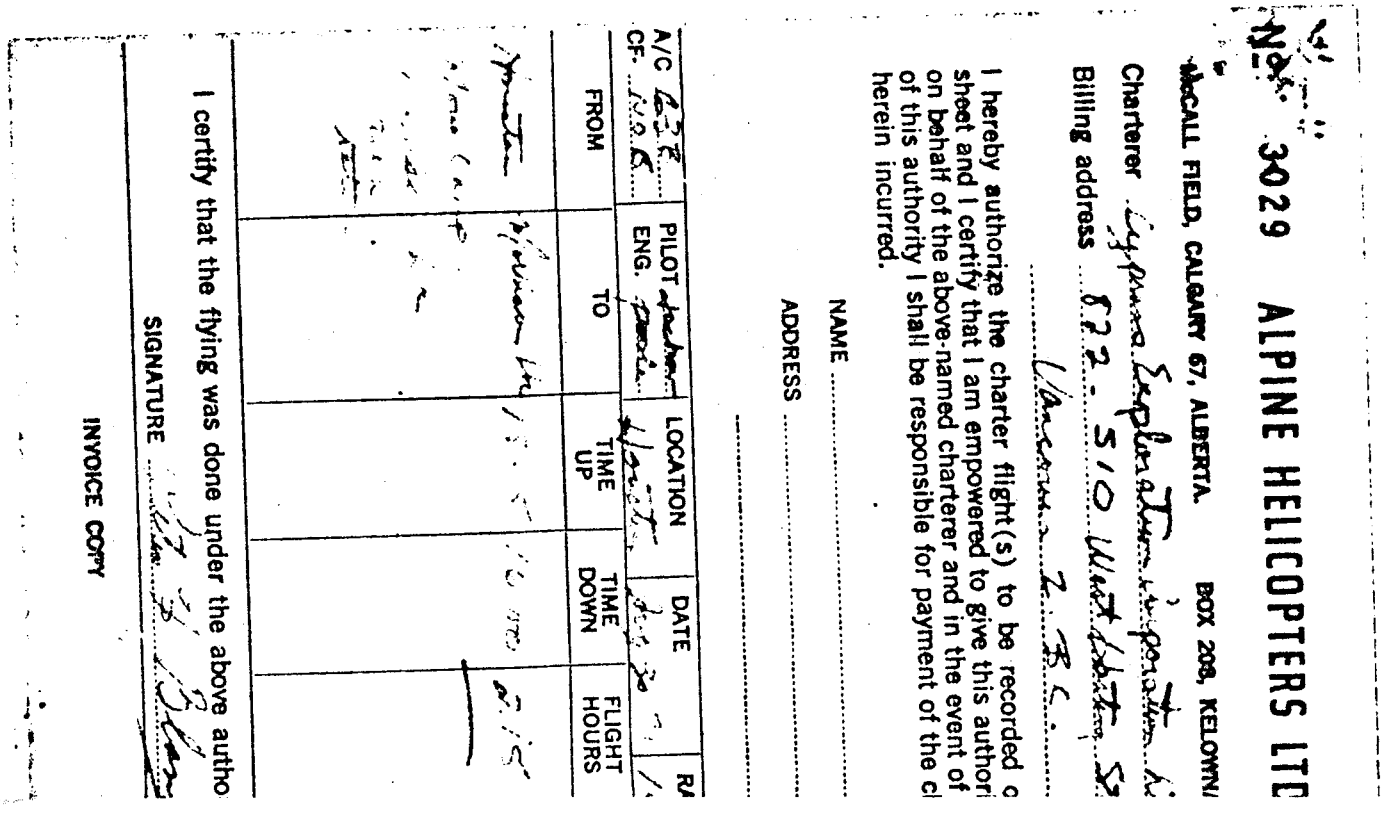
WORK ORDER NO

TO: CHARGE FOR HIRE OF BELL 47G3B HELICOPTER
IN THE HOUSTON AREA

CF-NOB AUG.30/70 FLIGHT REPORT NO. 3029 2:15 hrs.

2 hrs. .15 mins. @ $145.00 per hr. $326.25

TOTAL AMOUNT DUE THIS INVOICE $326.25



No. 3029 ALPINE HELICOPTERS LTD

McCALL FIELD, CALGARY 67, ALBERTA. BOX 208, KELOWNA

Charterer Cypress Exploration

Billing address 822 - 510 W. Hastings St.

Vancouver 2, B.C.

I hereby authorize the charter flight(s) to be recorded on this sheet and I certify that I am empowered to give this authority on behalf of the above-named charterer and in the event of non-payment of this authority I shall be responsible for payment of the charges herein incurred.

NAME

ADDRESS

A/C CF. NOB

FROM	TO	PILOT ENG.	LOCATION	TIME UP	TIME DOWN	DATE	FLIGHT HOURS	R
Houston	Houston							

I certify that the flying was done under the above authority

SIGNATURE

INVOICE COPY

BASE Smithers BASE NO 12 DATE 22 10 70 (DAY / MONTH / YEAR) 16791

FLIGHT REPORT

OKANAGAN HELICOPTERS LTD.
HEAD OFFICE
VANCOUVER INTERNATIONAL AIRPORT
RICHMOND, B.C.

LOCATION OF FLIGHT Local | FLIGHT LOCATION 185 | TYPE OF FLIGHT

ACCOUNT NO 20530 4 | AIRCRAFT REG. CF- CQB

CHARTERER: Cyprus Explorations Ltd.
1101 - 510 W Hastings St.
Vancouver 2, BC

TYPE OF CONTRACT – X: CHARTER X | DAILY MINIM. | TERM
STATE OF A/C: UNSERVICEABLE | STORED

PILOT 1: G. Freeman
PILOT 2:

FUEL & OIL – X			FLYING HOURS ACCORDING TO FUEL USED			PUR. ORDER NO.
O.H. LTD.	X	CUST.	O H L		CUST.	

OPERATION	TAKE-OFF	LAND	FLYING TIME
Smithers - Morrison Lake Area - Smithers			3 5
Camp & Crew Move			
7 Sling Loads			

#143

RECEIVED
NOV 2 - 1970

OUR TERMS ARE ... DAYS - Interest of 1% per month will be ... added if not paid within 30 days."

NO. OF PASSENGERS	DETAILS OF CHARGES	EXPENSE CLAIM NO.		AMOUNT	NON REV. HRS.	RATE	REVENUE HRS.
FREIGHT LBS. 4,500						230.00	3 5
						SUB TOTAL →	900.85

BY THE SIGNING OF THIS FLIGHT REPORT I ACKNOWLEDGE THAT THE TERMS AND CONDITIONS THEREOF AS SET FORTH IN THE TARIFF FILED WITH THE A.T.B. ARE AVAILABLE FOR EXAMINATION AT OKANAGAN HELICOPTERS LTD.

EXTRA CHARGES OR ADJUSTMENTS

SIGNED FOR CHARTERER BY: R Woolnough

SIGNED FOR OKANAGAN HELICOPTERS LTD. BY: G. Freeman

TOTAL CUSTOMER INVOICE → $ 900.85

(143)

BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: October 1, 1970

PROJECT: 120-33

PERIOD COVERED:

PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 272-B
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

Cyprus Exploration Corp. Ltd.,
1101 - 510 W. Hastings St.,
Vancouver 2, B. C.

TERMS: NET

AUTHORITY: Mr. Paul Sawyer - Your Proj. 143

TO: Geochemical Analysis

107 Samples analysed for total copper	@ $1.00 each	107.00	
107 Samples analysed for total molybdenum	@ $2.50 each	267.50	
107 Soil sample preparation	@ $0.20 each	21.40	
			395.90

RECEIVED
OCT 19 1970

APPROVED
OCT 19 1970
FOR PAYMENT

INVOICE № 7891

143

BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: October 2, 1970

PROJECT: 120-33

PERIOD COVERED:

PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 273-B
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

Cyprus Exploration Corp. Ltd.,
1101 - 510 W. Hastings,
Vancouver 2, B. C.

TERMS: NET

AUTHORITY: Mr. C. McFall - Your Proj: 143 "David Minerals"

TO: Geochemical Analysis

336 Samples analysed for total copper	@ $1.00 each	336.00
336 Samples analysed for total moly.	@ $2.50 each	~~840.00~~ 837.50
336 Soil sample preparation	@ $0.20 each	67.20
		1240.70
		~~1,243.20~~

RECEIVED
OCT 19 1970

APPROVED
OCT 19 1970
FOR PAYMENT

INVOICE Nº 7885

BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: October 31,1970

PROJECT: 120.33

PERIOD COVERED:

PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 301-B
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

- Cyprus Exploration Corp.
  Searchlight Exploration Corp.
- 1101 - 510 West Hastings St.
  Vancouver, B. C.
-

TERMS: NET

AUTHORITY: Mr. Neil A. Thomsen, your Proj. David Minerals # 143

TO: Geochemical Analysis

✓ 414 Samples analysed for total copper	@ $1.00 each	414.00	
✓ 414 Samples analysed for total molybdenum	@ $2.50 each	1,035.00	
✓ 414 Soil sample preparation	@ $0.20 each	82.80	
			1,531.80 ✓

APPROVED
NOV 24 1970
[illegible]

RECEIVED
NOV 17 1970

INVOICE № 7846

#143.

BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: November 25,1970

PROJECT: 120.33

PERIOD COVERED:

PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 317-B
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

• Cyprus Exploration Corp. Ltd.
1101 - 510 West Hastings St.,
• Vancouver 2, B. C.

•

TERMS: NET

AUTHORITY: Mr. R. Woolverton/Mr. N. Thompson, your Project "David Minerals"

TO: Geochemical Analysis

1450			
~~1,440~~ Samples analysed for total copper	@ $1.00 each	~~1,440.00~~	1450.00
100 ~~99~~ Samples analysed for HCL copper	@ $1.00 each	~~99.00~~	100.00
~~1,539~~ ~~Soil~~ sample preparation	@ $0.20 each	~~307.80~~	310.00
1550			
			~~1,846.00~~
			1,860.00

I counted these myself - ink figures are correct
23/12/70

SPARK GROUP

DAVID NO. 1 GROUP

DAVID NO. 3 GROUP

DAVID NO. 2 GROUP

MORRISON LAKE

SPARK 71 SPARK 72 SPARK 63 SPARK 64
SPARK 69 SPARK 70 SPARK 61 SPARK 62
SPARK 67 SPARK 68 SPARK 59 SPARK 60
SPARK 65 SPARK 66 SPARK 57 SPARK 58
SPARK 45 SPARK 17 & SPARK 46 SPARK 18 SPARK 49 SPARK 50 SPARK 55 SPARK 56
SPARK 43 SPARK 15 & SPARK 44 SPARK 16 SPARK 47 SPARK 48 SPARK 53 SPARK 54
SPARK 41 SPARK 13 & SPARK 42 SPARK 14 SPARK 27 SPARK 28 SPARK 51 SPARK 52
SPARK 39 SPARK 11 & SPARK 40 SPARK 12 SPARK 25 SPARK 26 SPARK 35 SPARK 36
SPARK 37 SPARK 9 & SPARK 38 SPARK 10 SPARK 23 SPARK 24 SPARK 33 SPARK 34
SPARK 7 SPARK 8 SPARK 21 SPARK 22 SPARK 31 SPARK 32
SPARK 5 SPARK 6 SPARK 19 SPARK 20 SPARK 29 SPARK 30
JOY 52 JOY 53 JOY 55 JOY 57 JOY 59 SPARK 1 SPARK 3
JOY 51 JOY 54 JOY 56 JOY 58 JOY 60 SPARK 2 SPARK 4
JOY 36 JOY 37 JOY 39 JOY 41 JOY 43 JOY 45 JOY 47 JOY 49
JOY 35 JOY 38 JOY 40 JOY 42 JOY 44 JOY 46 JOY 48 JOY 50
JOY 18 JOY 19 JOY 21 JOY 23 JOY 25 JOY 27 JOY 29 JOY 31 JOY 33
JOY 17 JOY 20 JOY 22 JOY 24 JOY 26 JOY 28 JOY 30 JOY 32 JOY 34
JOY 2 JOY 3 JOY 5 JOY 7 JOY 9 JOY 11 JOY 13 JOY 15
JOY 1 JOY 4 JOY 6 JOY 8 JOY 10 JOY 12 JOY 14 JOY 16

2896 M-1

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #1

PALISADE EXPLORATION CORPORATION, LTD.

DAVID MINERALS PROJECT

CLAIM MAP

DESIGNED
DRAWN C.L.C.
CHECKED
DATE JAN. 1971

SCALE HOR. 1" = 800'
VERT.
DWG. No.

R. Woolverton

TO ACCOMPANY A GEOPHYSICAL AND GEO-CHEMICAL REPORT BY R. WOOLVERTON P. ENG. ON THE SPARK 1-72 AND JOY 1-60 CLAIMS.
DATED 26 Feb 1971

MAP #1

145W 140W 135W 130W 125W 120W 115W 110W 105W 100W 95W 90W 85W 80W 75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0

BASELINE

L 152 N
L 144 N
L 136 N
L 128 N
L 124 N
L 120 N
L 116 N
L 112 N
L 108 N
L 104 N
L 100 N
L 96 N
L 92 N
L 88 N
L 84 N
L 80 N
L 76 N
L 72 N
L 68 N
L 64 N
L 60 N
L 56 N
L 52 N
L 48 N
L 44 N
L 40 N

CLAIM OUTLINE

MORRISON LAKE

CLAIM OUTLINE

LEGEND

SAMPLE LOCATION — TOTAL Cu IN PPM — LINE TRACE — TOTAL Mo IN PPM

40, 80, 120 CONTOURS

KEY MAP

PLATE 2
PLATE 1

400 0 400 800
SCALE IN FEET

MATCH LINE — FOR CONTINUATION SEE PLATE 1

TO ACCOMPANY A GEOPHYSICAL & GEOCHEMICAL REPORT BY R WOOLVERTON P ENG. ON THE SPARK 1-72 & THE JOY 1-60 CLAIMS. DATED 26 Feb 1971

R Woolverton

2896

M-2

PALISADE EXPLORATION CORPORATION LTD.

PLATE 2 — MORRISON LAKE
OMINECA M.D. BRITISH COLUMBIA

GEOCHEMICAL SURVEY
TOTAL Cu & Mo IN PPM

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD	VERSATILE DRAFTING LTD	1/27/71

65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0 5E 10E 15E 20E 25E 30E 35E 40E 45E 50E 55E 60E 65E 70E 75E

MATCH LINE - FOR CONTINUATION SEE PLATE 2

BASELINE

L 36 N
L 32 N
L 28 N
L 24 N
L 20 N
L 16 N
L 12 N
L 8 N
L 4 N
L 0
L 4 S
L 8 S
L 12 S
L 16 S
L 20 S
L 24 S
L 28 S
L 32 S
L 36 S
L 40 S
L 44 S
L 48 S
L 52 S
L 56 S
L 60 S
L 64 S
L 68 S

CLAIM OUTLINE

MORRISON LAKE

CLAIM OUTLINE

LEGEND

SAMPLE LOCATION — TOTAL Cu IN PPM (54) — LINE TRACE — TOTAL Mo IN PPM

40, 80, 120 CONTOURS

KEY MAP

PLATE 2 PLATE

400 0 400 800

SCALE IN FEET

TO ACCOMPANY A GEOPHYSICAL & GEOCHEMICAL REPORT BY R. WOOLVERTON P. ENG. ON THE SPARK 1-72 & THE JOY 1-60 CLAIMS DATED 26 Feb 1971

R. Woolverton

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
2886 MAP 113

PALISADE EXPLORATION CORPORATION LTD.

PLATE I — MORRISON LAKE
OMINECA M.D. BRITISH COLUMBIA

GEOCHEMICAL SURVEY
TOTAL Cu & Mo IN PPM

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD.	VERSATILE DRAFTING LTD.	1/27/71

145W 140W 135W 130W 125W 120W 115W 110W 105W 100W 95W 90W 85W 80W 75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0

BASELINE

L 152 N

L 144 N

L 136 N

L 128 N

L 124 N

L 120 N

L 116 N

L 112 N

L 104 N

L 96 N

CLAIM OUTLINE

L 88 N

L 80 N

L 72 N

L 64 N

L 56 N

L 48 N

L 40 N

MORRISON LAKE

CLAIM OUTLINE

MATCH LINE - FOR CONTINUATION SEE PLATE I

LEGEND

LINE TRACE

Out of phase

In phase

+120° DIP ANGLE 0 -120°

400% FIELD STRENGTH 0

KEY MAP

PLATE II

PLATE I

400 0 400 800

SCALE IN FEET

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #4

R. Woolverton

TO ACCOMPANY A GEOPHYSICAL & GEOCHEMICAL REPORT BY R. WOOLVERTON, P. ENG., ON THE SPARK 1-72 CLAIMS AND THE JOY 1-60 CLAIMS DATED 26 Feb 1971

PALISADE EXPLORATION CORPORATION LTD.

DAVID MINERALS PROPERTY
PLATE 2 — MORRISON LAKE
OMINECA M. D. BRITISH COLUMBIA

RADEM SURVEY
SEATTLE, WASH. FREQUENCY

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD	VERSATILE DRAFTING LTD	1/27/71

65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0 5E 10E 15E 20E 25E 30E 35E 40E 45E 50E 55E 60E 65E 70E 75E

MATCH LINE — FOR CONTINUATION SEE PLATE 2

BASELINE

L 32 N

L 24 N

L 16 N

L 8 N

L 4 S

L 12 S

L 20 S

L 28 S

L 36 S

L 44 S

L 52 S

L 60 S

L 68 S

CLAIM OUTLINE

MORRISON LAKE

CLAIM OUTLINE

LEGEND

RADEM

EM 16

Out of phase

In phase

LINE TRACE

+20°

0

-20°

DIP ANGLE

400%

FIELD STRENGTH

OUT OF PHASE

N

KEY MAP

PLATE 2

PLATE 1

400 0 400 800

SCALE IN FEET

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #5

R. Woolverton

TO ACCOMPANY A GEOPHYSICAL & GEOCHEMICAL REPORT BY R. WOOLVERTON, P. ENG., ON THE SPARK 1-72 CLAIMS AND THE JOY 1-60 CLAIMS DATED 26 Feb 1971

PALISADE EXPLORATION CORPORATION LTD.

DAVID MINERALS PROPERTY

PLATE I — MORRISON LAKE

OMINECA M.D. BRITISH COLUMBIA

RADEM SURVEY

SEATTLE, WASH. FREQUENCY

WORK BY	DRAWN BY	DATE
VERWOERN EXPLORATIONS LTD.	VERSATILE DRAFTING LTD.	1/27/71

145W 140W 135W 130W 125W 120W 115W 110W 105W 100W 95W 90W 85W 80W 75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0

BASELINE

L 152 N

L 144 N

L 136 N

L 128 N

L 124 N

L 120 N

L 116 N

L 112 N

L 104 N

L 96 N

CLAIM OUTLINE

L 88 N

L 80 N

L 72 N

L 64 N

L 56 N

L 48 N

L 40 N

MORRISON LAKE

CLAIM OUTLINE

MATCH LINE — FOR CONTINUATION SEE PLATE I

LEGEND

LINE TRACE

Out of phase

In phase

+20° 0 -20° DIP ANGLE

400 % 0 OUT OF PHASE

KEY MAP

PLATE 2

PLATE 1

400 0 400 800

SCALE IN FEET

N

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #6

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R. Woolverton

PALISADE EXPLORATION CORPORATION LTD.

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PLATE 2 — MORRISON LAKE

OMINECA M.D. BRITISH COLUMBIA

RADEM SURVEY

CUTLER, MAINE FREQUENCY

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD.	VERSATILE DRAFTING LTD.	1/27/71

MAP #6

65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0 5E 10E 15E 20E 25E 30E 35E 40E 45E 50E 55E 60E 65E 70E 75E

MATCH LINE - FOR CONTINUATION SEE PLATE 2

L 32 N

L 24 N

L 16 N

L 8 N

L 4 S

L 12 S

L 20 S

L 28 S

L 36 S

L 44 S

L 52 S

L 60 S

L 68 S

BASELINE

CLAIM OUTLINE

CLAIM OUTLINE

MORRISON LAKE

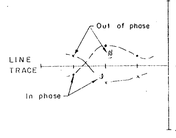
OFF AIR

OFF AIR

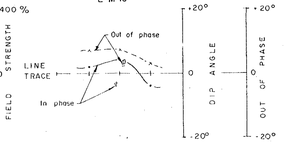
OFF AIR

LEGEND

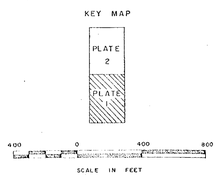
RADEM



EM 16



KEY MAP



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
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DAVID MINERALS PROPERTY

PLATE I — MORRISON LAKE

OMINECA M.D. BRITISH COLUMBIA

RADEM SURVEY

CUTLER, MAINE FREQUENCY

WORK BY	DRAWN BY	DATE
VERSATILE EXPLORATIONS LTD.	VERSATILE DRAFTING LTD.	1/27/71

140 W 135 W 130W 125 W 120 W 115W 110W 105 W 100W 95 W 90W 85W 80 W 75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10 W 5W 0

BASE LINE

L 152 N
L 144 N
L 136 N
L 128 N
L 124 N
L 120 N
L 116 N
L 112 N
L 104 N
L 96 N
L 88 N
L 80 N
L 72 N
L 64 N
L 56 N
L 48 N
L 40 N

CLAIM OUTLINE

MORRISON LAKE

CLAIM OUTLINE

INSTRUMENT:

SABRE - PORTABLE PULSE TYPE
500 WATTS a = 400' WENNER ARRAY

3a
a a a
V I

RESISTIVITY IN OHM-FEET
LINE TRACE
CHARGEABILITY IN MILLISECONDS

2 MS CONTOURS
4 MS CONTOURS
6 & 8 MS CONTOURS

800, 1600, 3200 OHM-FEET CONTOURS
400 OHM-FEET CONTOURS
200 OHM-FEET CONTOURS

KEY MAP
PLATE I

400 0 400 800
SCALE IN FEET

MATCH LINE

FOR CONTINUATION SEE PLATE I

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #8

R. Woolverton

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PALISADE EXPLORATION CORPORATION LTD.

DAVID MINERALS PROPERTY
PLATE 2 – MORRISON LAKE
OMINECA M.D. BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY
CONTOUR PLAN

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD	VERSATILE DRAFTING LTD	1/27/71

60W 55W 50W 45W 40W 35W 30W 25W 20W 15W 10W 5W 0 5E 10E 15E 20E 25E 30E 35E 40E 45E 50E 55E 60E 65E 70E 75E

MATCH LINE — FOR CONTINUATION SEE PLATE 2

L 32 N

L 24 N

L 16 N

L 8 N

L 4 S

L 12 S

L 20 S

L 28 S

L 36 S

L 44 S

L 52 S

L 60 S

L 68 S

BASE LINE

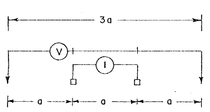
CLAIM OUTLINE

CLAIM OUTLINE

MORRISON LAKE

INSTRUMENT:

SABRE - PORTABLE PULSE TYPE
500 WATTS a = 400' WENNER ARRAY



RESISTIVITY IN OHM-FEET

LINE TRACE

CHARGEABILITY IN MILLISECONDS

2 MS CONTOURS

4 MS CONTOURS

6 & 8 MS CONTOURS

800, 1600, 3200 OHM-FEET CONTOURS

400 OHM-FEET CONTOURS

200 OHM-FEET CONTOURS

KEY MAP

PLATE 2

PLATE 1

400 0 400 800

SCALE IN FEET

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2896 MAP #9

R. Woolverton

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PALISADE EXPLORATION CORPORATION, LTD.

DAVID MINERALS PROPERTY
PLATE I — MORRISON LAKE
OMINECA M.D. BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY
CONTOUR PLAN

WORK BY	DRAWN BY	DATE
EVERGREEN EXPLORATIONS LTD.	VERSATILE DRAFTING LTD.	1/27/71

MAP #9